



ADMISSION TO DOCTORAL STUDIES

Session September 2026

Field of doctoral studies: Industrial Engineering

Doctoral supervisor: Prof. Dr. Eng. Aurica Luminița Pârv

TOPICS FOR THE ADMISSION TO DOCTORAL STUDIES

TOPIC 1: *LEAN 5.0 – LEAN/ Industry 4.0/ Industry 5.0*

Contents / Main aspects to be considered:

- *LEAN 5.0 – conceptual model*
- *Tools AI for LEAN*
- *LEAN 5.0 – maturity models*

Recommended bibliography:

- Xu, X., Lu, Y., Vogel-Heuser, B., & Wang, L. (2021). Industry 4.0 and Industry 5.0— Inception, conception and perception. *Journal of Manufacturing Systems*, 61, 530–535.
- Rosin, F., Forget, P., Lamouri, S., & Pellerin, R. (2020). Impacts of Industry 4.0 technologies on lean principles. *International Journal of Production Research*, 58(6), 1644–1661.
- Vaezinejad, S., Schniederjans, D. (2023). Lean Supply Chain 5.0 Management (LSCM 5.0): Lean and Value Reconceptualized. In: Sarkis, J. (eds) *The Palgrave Handbook of Supply Chain Management*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-89822-9_22-1
- Vaezinejad, S., Schniederjans, D. (2024). Lean Supply Chain 5.0 Management (LSCM 5.0): Lean and Value Reconceptualized. In: Sarkis, J. (eds) *The Palgrave Handbook of Supply Chain Management*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-19884-7_22

x Scientific Doctorate

x Professional Doctorate

x without tuition fee (state budget funded)

x with tuition fee or with funding from other sources than the state budget

TOPIC 2: *Sustainable Supply Chain***Contents / Main aspects to be considered:**

- *Triple Bottom Line (TBL) applied in Supply Chain*
- *Circular Supply Chain Model*
- *Sustainable Supply Chain Maturity Model*

Recommended bibliography:

- Nousala, S.(eds) (2024) *Industry 4.0 to Industry 5.0 - Explorations in the Transition from a Techno-economic to a Socio-technical Future*. Springer.
<https://doi.org/10.1007/978-981-99-9730-5>
- Garcia-Buendia, N., Moyano-Fuentes, J., Maqueira-Marín, J. M., & Cobo, M. J. (2021). 22 years of lean supply chain management: A science mapping-based bibliometric analysis. *International Journal of Production Research*, 59(6), 1901–1921.
- Sarkis, J. (eds) (2024) *The Palgrave Handbook of Supply Chain Management*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-19884-7_22

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Doctoral supervisor,

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Signature

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Prof. Dr. Eng. Gheorghe Oancea

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